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Second paragraph on page 15, lines 3-14, has been amended as follows:

a²
Referring now to Figure 2, wherein the present invention touch screen mounting assembly 50 is shown. The touch screen mounting assembly 50 consists of a bottom frame 60, a backlight panel 70, a liquid crystal display panel 80, and a top frame 90. As shown in Figure 2, the bottom frame has a substantially rectangular-shaped cavity 62 therein for mounting a backlight panel 70 thereto. The bottom frame 60 is further equipped with a plurality of attachment means 64, each having a compressible spring [66] 76, or a coil spring, (as shown in Figure 2A). The plurality of attachment means 64 are mounted on an outer periphery 66 of the bottom frame member 60.

REMARKS

Thorough examination and careful review of the application by the Examiner is noted and appreciated.

Claims 1-17 are pending in the application. Claims 1-17 stand rejected.

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Objection To The Drawings

The drawings are objected to for the reference numeral "66" being used twice.

The specification at page 15 is amended to correct the double usage of the reference numeral "66". No drawing correction is required.

Claim Rejections Under 35 USC §103

Claims 1-14, 16 and 17 are rejected under 35 USC §103(a) as being unpatentable over Bowman et al '569 in view of Flowers et al '142 and Plesinger '354. It is contended that Bowman et al teaches substantially the invention except the backlighted LCD panel or the details of the mounting assembly as described in claim 1, while Plesinger discloses a backlight panel for supplying illumination to an LCD panel.

The rejection of claims 1-14, 16 and 17 under 35 USC §103(a) based on Bowman et al, Flowers et al and Plesinger is respectfully traversed.

Bowman et al discloses a touch screen mounting assembly which can be attached to mounting ears on an ordinary CRT assembly. The assembly includes a frame, a glass plate that is sealed on a gasket at one surface of the frame and a plurality of piezoelectric elements which are bonded to the glass plate and are trapped between the CRT face and the glass plate. The plurality of pressure-sensitive transducers (i.e. the piezoelectric sensors) are therefore mounted **outside** of a CRT assembly, or outside of a self-lit screen. The plurality of pressure-sensitive transducers are actually mounted on a retro-fitted touch screen assembly onto the surface of a glass push plate (36). As stated by Bowman et al at col. 3, lines 19+:

"In a preferred embodiment of the invention, force-sensitive or piezoelectric transducers 38 are attached to one surface of the plate 36 using tabs 40 having layers of adhesives on both surfaces. The piezoelectric transducers 38 ... facing the CRT face 12 to provide a point contact ..."

To the contrary, the present invention mount a plurality of pressure-sensitive transducers in-between a light source (a backlit panel 70) and a LCD panel 80. The present invention touch

screen mounting assembly does not mount the plurality of pressure-sensitive transducers outside a self-lit screen, such as that of Bowman et al. This is clearly recited in the present invention, independent claim 1:

"Claim 1. A touch screen mounting assembly for a liquid crystal display (LCD) panel comprising:

a bottom frame having a substantially ...;

a backlight panel for supplying illumination to said LCD panel ..., said front surface having a plurality of pressure-sensitive transducers mounted thereto;

a liquid crystal display panel positioned juxtaposed to said front surface of said **backlight panel sandwiching** said plurality of pressure-sensitive transducers **therein between**; and

a top frame for compressing said compressible springs ..."

The present invention therefore narrowly claims the invention as one that requires a plurality of pressure-sensitive transducers mounted in-between a liquid crystal display panel and a backlight panel. This is patentably distinct from the teaching

of Bowman wherein the plurality of pressure-sensitive transducers are mounted completely outside of a self-lit CRT tube (which can be viewed as a combination of the liquid crystal display panel and backlight panel).

The criticality of such mounting technique, i.e. sandwiching the plurality of pressure-sensitive transducers in-between a liquid crystal display panel and a backlight panel, is clearly recited in the specification at pages 16 and 17. For instance, at page 16, line 7+:

"The front surface 82 has a plurality of pressure-sensitive transducers 100 mounted thereto. The plurality of pressure-sensitive transducers may be advantageously piezoelectric transducers, ... The piezoelectric transducers 100 preferably has a domed surface that is mounted to face the LCD panel 80 such that a point contact between the transducer 100 and the back surface 86 of the LCD panel 80 is maintained at all times."

Furthermore, at page 17, line 7:

"When the top frame 90 is mounted to the bottom frame 60 sandwiching the backlight panel 70 and the LCD panel 80, the coil springs 76 bias the LCD panel 80 toward the bottom frame 60 such that **any slight pressure or contact** on the LCD panel 80 can be detected by the plurality, i.e., four piezoelectric transducers 100 to determine the X-Y coordinates of the contact or touch."

The Applicants further submit that such criticality in the location for mounting the plurality of pressure-sensitive transducers is not taught, disclosed or suggested by the secondary references of Plesinger and Flowers et al.

Similar recitations reflecting such criticality is also repeated in independent method claim 10.

The rejection of claims 1-14, 16 and 17 under 35 USC §103(a) based on Bowman et al, Flowers et al and Plesinger is respectfully traversed. A reconsideration for allowance of these claims is respectfully requested of the Examiner.

Claim 15 is rejected under 35 USC §103(a) as being unpatentable over Bowman et al, Flowers et al, Plesinger, and further in view of Garwin et al '760. It is contended that Garwin et al teaches calculating the pressure at each distant corner of the bottom frame to determine a location on the LCD panel that was touched.

The rejection of claim 15 under 35 USC §103(a) based on Bowman et al, Flowers et al, Plesinger and Garwin et al is respectfully traversed.

The Applicants respectfully submit that none of the four primary and secondary references teaches the critical requirement recited in independent method claim 10 of:

"mounting a backlight panel for illuminating said LCD panel to said bottom frame, said backlight panel having a back surface and a front surface, said back surface intimately engages said bottom frame while said front surface having a plurality of pressure-sensitive transducers mounted at each distant corner of said backlight panel;
positioning a LCD panel juxtaposed to said front

surface of said backlight panel **sandwiching** said plurality of pressure-sensitive transducers therein between."

A reconsideration for allowance of claim 15 is respectfully requested of the Examiner.

Based on the foregoing, the Applicants respectfully submit that all of the pending claims, i.e. claims 1-17, are now in condition for allowance. Such favorable action by the Examiner at an early date is respectfully solicited.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attached page is captioned "Version With Markings To Show Changes Made".

In the event that the present invention is not in a condition for allowance for any other reasons, the Examiner is respectfully invited to call the Applicants' representative at his Bloomfield Hills, Michigan office at (248) 540-4040 such that

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necessary action may be taken to place the application in a condition for allowance.

Respectfully submitted,

Tung & Associates

A handwritten signature in dark ink, appearing to be 'Randy W. Tung', is written over a horizontal line. The signature is stylized with a large loop at the beginning.

Randy W. Tung

Reg. No. 31,311

Telephone: (248) 540-4040

RWT\kd



VERSION WITH MARKINGS TO SHOW CHANGES MADE

In The Specification

First paragraph on page 16, line 17, has been amended as follows:

The backlight panel 70 is an illumination device, which may contain fluorescent lighting fixtures therein, or any other suitable illuminating means. The backlight panel 70 supplies illumination to the LCD panel 80 and is mounted to the bottom frame 60. The backlight panel 70 has a front surface 82 that is opposite to a back surface 84 that faces the bottom frame 60. The front surface 82 has a plurality of pressure-sensitive transducers 100 mounted thereto. The plurality of pressure-sensitive transducers may be advantageously piezoelectric transducers, which are readily available from many commercial sources. The piezoelectric transducers 100 preferably has a domed surface that is mounted to face the LCD panel 80 such that a point contact between the transducer 100 and the back surface 86 of the LCD panel 80 is maintained at all times. The output from the transducers 100 is fed to a pressure-sensing circuit (not shown) by a wiring means ([now] not shown). The precise location on the LCD panel 80 that is touched can thus be determined by the



pressure-sensing circuit in a X-Y coordinate.

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